

MMWR

MORBIDITY AND MORTALITY WEEKLY REPORT

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Epidemiologic Notes and Reports

MAR 22 1979

Conjunctivitis Caused by Unshielded Mercury-Vapor Lamps — Michigan, New Jersey

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Two outbreaks of conjunctivitis involving a total of approximately 75 persons were recently reported to CDC. The outbreaks, which occurred in Michigan and New Jersey in late 1978, were both traced to broken mercury-vapor lamps in public gymnasiums.

Michigan: On November 28, approximately 50 persons in Wayne County developed conjunctivitis after attending a basketball game in a high-school gymnasium. The conjunctivitis was found by local health investigators to have been caused by exposure to ultraviolet (UV) radiation from an unshielded mercury-vapor lamp.

Symptoms and signs included eye pain, swollen eyelids, increased lacrimation, injected sclerae, and headache. Most persons developed symptoms very shortly after the game, and 2 noted onset during the game itself. Minimal symptoms occurred also in several members of the basketball teams. Duration of symptoms ranged from a few hours to several days. No conjunctival pus or associated respiratory symptoms were noted. Several persons sought medical attention; none required hospitalization.

Investigation by the local health department showed that the school had installed mercury-vapor lamps in the gymnasium in July 1978. Protective wire cages had been installed around the lamps, but they had not been securely fastened. One of the lamps was shown to be missing its cage and to have a broken outer globe, although the inner bulb was intact and in working order. All other lamps were intact. The broken lamp was situated 6 meters above the floor and was located closer to the spectators on 1 side of the gymnasium (8.2-12.1 meters) than to those on the opposite side (≥ 13.7 meters). All known cases of conjunctivitis in spectators occurred in those who had been sitting on the side of the gymnasium closer to the broken lamp.

It appeared that the protective cage around the lamp had been dislodged by a high-flying basketball, which may also have broken the outer globe. The broken lamp had first been noted 2 weeks before the game, and several physical education students and their coach had experienced mild eye irritation during the 2-week period; their symptoms had not, however, been of sufficient intensity for them to seek medical attention.

School officials have securely fastened the wire cages to the mercury lamps to prevent their being dislodged again. The county health department has alerted local schools to the potential hazard of such unshielded lamps.

New Jersey: On December 27, an outbreak of conjunctivitis and skin erythema was reported to local health officials by members of a Monmouth County community center. Field investigations and telephone interviews revealed that 26 known cases of eye and skin irritation had occurred sporadically over a 6-week period from November 16 to December 27.

Conjunctivitis - Continued

Symptoms, in order of frequency, were a sensation of "sand in the eyes," with burning or itching, in 23 cases (88%), tearing (80%), red eyes (69%), skin erythema with or without exfoliation (54%), swollen eyelids (50%), and photosensitivity (50%). Skin erythema appeared on light-exposed surfaces, occasionally with clear demarcation of the shirtline. Five patients examined in the acute stage by an ophthalmologist were observed to have superficial punctate keratitis.

Twenty-five of the patients (96%) were users of the basketball court in the community center's new gymnasium, versus 36 of 53 controls (68%). Thirteen patients (50%) used only the basketball court and had no contact with other facilities such as the showers, pool, locker room, or game room. One patient was a township health officer investigating the other cases. Recurrent episodes occurred in 3 habitual basketball players and in 2 coaches of league games. Clusters, varying from 2 to 6 cases, were noted following Sunday or Tuesday evening games, and 10 cases had occurred over the Christmas week. No transmission of conjunctivitis occurred from patients to family members who did not frequent the gymnasium. The mean playing time on the basketball court was 2.35 hours among patients, versus 1.2 hours among controls ($p < 0.0005$). A linear regression model revealed a significant relationship between becoming ill and using the west end of the basketball court. Attack rates decreased among players whose activities were limited to half-court games on the east end of the court or to the jogging track outside the court ($p < .0001$).

Two damaged overhead mercury high-intensity discharge lamps were located over the west end of the court. Both had shattered outer casings, but the inner bulb in one continued to burn, bathing a 254 square-meter area of the court with UV as well as optical light. A 24-inch aluminum spread reflector, 6.3 meters above the court, was designed to maximize distribution of optical radiation. Measurements of optical radiation at ground level were used as an indirect indication of the spread of UV light. The area of greatest exposure included a circle with a radius of 9 meters directly under the light. No additional cases occurred after the bulb was replaced.

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Editorial Note: Overexposure to UV radiation has been shown to cause keratoconjunctivitis and erythema. Natural UV radiation poses a hazard to farmers, sailors, construction workers, and to other outdoor workers, particularly to those at latitudes close to the earth's equator and in circumpolar regions. Such groups also suffer from an increased incidence of skin cancer as a result of their chronic overexposure to UV radiation (1). Artificial UV light has been shown to cause conjunctivitis in bank tellers who examine notes for forgeries (2) and in biologists who conduct experiments under such light (3).

An outbreak of conjunctivitis and erythema in a New Jersey girls' basketball team was described recently (4). The circumstances were virtually identical to those in these outbreaks: a hole in the outer envelope of a mercury-vapor lamp had allowed the escape of UV radiation normally blocked by the borosilicate glass of the outer globe. The authors of that report recommended "careful inspection at regular intervals of all such bulbs currently in use" and checking gymnasium floors for broken glass as preventive measures. Such steps would appear to be necessary because many currently used brands of bulbs do not contain thermal switches that cause them to shut off when the outer casings are broken.

Conjunctivitis — Continued

Several people associated with the Michigan outbreak reported that the gymnasium was very hot and humid during the game. The athletic director estimated the temperature to be 80 F (26.6 C). One study has shown that increasing the surface skin temperature of mice exposed to a mercury arc lamp significantly increased the degree of UV injury. Also, when mice were irradiated at high humidity, they sustained more serious damage than those exposed at low humidity (5). It is possible that the heat and humidity during the game increased the intensity and accelerated the effects of UV radiation.

Of particular interest in the New Jersey outbreak was that cases occurred sporadically for as long as 6 weeks, decreasing the chances that the incident would be recognized as having a common source. The occurrence of punctate keratitis in this outbreak demonstrates that serious corneal damage potentially can occur.

References

1. Mason TJ, McKay FW, Hoover R, Blot WJ, Fraumeni JF: Atlas of Cancer Mortality for U.S. Counties: 1950-1969. Washington, Government Printing Office, 1975
2. Barnes R: An unusual hazard in forgery detection. *Med J Aust* 1:540-541, 1970
3. Gulvady NU: UV keratoconjunctivitis vs established dose-effect relationships. *J Occup Med* 18:573, 1976
4. Halperin W, Altman R, Black K, Marshall FJ, Goldfield M: Conjunctivitis and skin erythema: Outbreak caused by damaged high-intensity lamp. *JAMA* 240:1980-1981, 1978
5. Owens DW: Effect of heat, wind, and humidity on ultraviolet injury. *Int J Dermatol* 17:52-54, 1978

High Serum Concentrations of DDT Residues — Triana, Alabama

In December 1978, the Tennessee Valley Authority (TVA) reported that fish caught in a tributary of the Tennessee River contained DDT-related compounds* in concentrations of up to 40 times the limit of 5 parts per million (ppm) set by the Food and Drug Administration. The source of contamination appeared to be a defunct DDT-manufacturing plant located on the tributary 10 km upstream from the town of Triana, Alabama. At the request of the Mayor of Triana and the Environmental Protection Agency, CDC began an investigation to assess the possible health hazards to the town's 1,000 residents, who depend on locally caught fish for a substantial portion of their diet.

Serum samples were obtained from 12 life-long residents. None had had industrial exposure to DDT. Their ages ranged from 43 to 83 years. Eleven of these samples contained an average concentration of 225 parts per billion (ppb) p,p'-DDE, a DDT metabolite. Concentrations ranged from 65 to 602 ppb. In these persons, p,p'-DDE accounted for 84.2% of the total DDT-related compounds.** The twelfth sample contained 3,256 ppb p,p'-DDE, a concentration 4 times higher than any value previously reported in the literature. In this individual, 97.3% of the total DDT-related compounds were in the form of p,p'-DDE. When this person's high value was included, the average concentration of p,p'-DDE in the 12 persons was 477 ppb, and the average of total DDT-related compounds was 524 ppb.

Although the small sample size precluded demonstration of statistical significance, the women had a lower mean p,p'-DDE level than the men had. Prior agricultural work and age did not appear to correlate with p,p'-DDE level. Fish consumption appeared to be positively associated with p,p'-DDE levels. Those persons eating fish once a week or less

*Abbreviations used for DDT and metabolites: p,p'-DDT: 1,1,1-trichloro-2,2-bis(p-chlorophenyl)ethane; p,p'-DDD (TDE): 1,1-dichloro-2,2-bis(p-chlorophenyl)ethane; p,p'-DDE: 1,1-dichloro-2,2-bis(p-chlorophenyl)ethylene.

**Total DDT-related compounds are the simple sum of 6 isomers.

DDT Residues — Continued

had a lower average p,p'-DDE level (162 ppb) than those eating fish at least twice a week (212 ppb). The highest serum p,p'-DDE values were in persons reporting fish consumption at 4 to 6 meals per week.

Pooled samples of 5 species of fish caught locally by the TVA and analyzed at CDC ranged from 19 to 450 ppm of DDT-related compounds. The average concentration was 204 ppm. Of the total DDT-related material in the fish 25.5% was in 2 forms of DDE; 71.4% was in 2 forms of DDD, a DDT metabolite that is not thought to be stored by humans nor to be converted to DDE to any great extent (7).

Reported by Enforcement Div, Region IV, Ecological Monitoring Br, Benefits and Field Studies Div, Environmental Protection Agency; Water Quality and Ecology Br, Div of Water Resources, TVA; Toxicology Br, Clinical Chemistry Div, Bur of Laboratories, and Special Studies Br, Chronic Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: DDT-related compounds have been found to be present in the serum of 99% of persons surveyed in the United States. The mean serum concentration of p,p'-DDE in the general population is 16.2 ppb (preliminary data from the National Center for Health Statistics' second national Health and Nutrition Examination Survey, provided by the Ecological Monitoring Branch, Environmental Protection Agency). As DDT progresses through the food chain, it undergoes a biotransformation, resulting in compounds such as p,p'-DDD and p,p'-DDE. The average levels of p,p'-DDE in the Triana sample are comparable to the p,p'-DDE concentrations in industrial workers most heavily exposed in the manufacture of DDT (2,3). Industrial workers have higher mean levels of total DDT.

(Continued on page 129)

TABLE I. Summary — cases of specified notifiable diseases, United States
(Cumulative totals include revised and delayed reports through previous weeks.)

DISEASE	11th WEEK ENDING		MEDIAN 1974-1978**	CUMULATIVE, FIRST 11 WEEKS		
	March 17, 1979	March 18, 1978*		March 17, 1979	March 18, 1978*	MEDIAN 1974-1978**
Aseptic meningitis	46	32	35	528	419	399
Brucellosis	1	2	3	14	34	34
Chickenpox	6,876	5,161	5,161	63,819	42,156	43,231
Diphtheria	9	2	3	49	21	36
Enccephalitis: Primary (arthropod-borne & unspec.)	7	11	11	102	116	133
Post-infectious	4	1	4	35	31	40
Hepatitis, Viral: Type B	272	328	303	2,704	3,180	2,995
Type A	543	633	656	6,054	5,779	7,578
Type unspecified	263	155	162	2,318	1,699	1,782
Malaria	11	17	10	79	100	65
Measles (rubella)	324	813	813	2,636	4,904	5,646
Meningococcal infection:: Total	60	58	50	690	578	393
Civilian	59	58	49	689	574	400
Military	1	-	1	1	4	4
Mumps	527	487	1,308	3,840	4,564	13,856
Pertussis	21	31	15	299	499	249
Rubella (German measles)	464	279	470	2,277	2,304	3,141
Tetanus	1	-	1	9	7	8
Tuberculosis	576	617	617	5,596	5,304	5,933
Tularemia	-	2	1	25	16	17
Typhoid fever	9	18	.8	78	116	74
Typhus fever, tick-borne (Rky. Mt. spotted)	1	1	1	21	10	11
Veneral diseases:						
Gonorrhea: Civilian	18,544	17,361	17,361	199,239	191,812	199,060
Military	535	315	477	5,730	4,847	5,797
Syphilis, primary & secondary: Civilian	467	399	399	5,084	4,201	4,699
Military	5	4	4	62	64	64
Rabies in animals	81	57	57	612	508	489

TABLE II. Notifiable diseases of low frequency, United States

	CUM. 1979		CUM. 1979
Anthrax	-	Poliomyelitis: Total	2
Botulism	3	Paralytic	2
Congenital rubella syndrome (Calif. 1)	4	Psittacosis †	24
Leprosy (NYC 1, Calif. 1)	38	Rabies in man	1
Leptospirosis	10	Trichinosis † (N.J. 1, Calif. 1)	22
Plague	1	Typhus fever, flea-borne (endemic, murine) (Tex. 1)	3

* Delayed reports received for calendar year 1978 are used to update last year's weekly and cumulative totals.

** Medians for gonorrhea and syphilis are based on data for 1976-1978.

† Delayed reports: Psittacosis: Colo. -1 (1978). Trichinosis: Colo. +1 (1978).

TABLE III. Cases of specified notifiable diseases, United States, weeks ending March 17, 1979, and March 18, 1978 (11th week)

REPORTING AREA	ASEPTIC MENINGITIS		BRUCELLOSIS	CHICKENPOX	DIPHTHERIA		ENCEPHALITIS			HEPATITIS (VIRAL), BY TYPE			MALARIA	
							Primary	Post-infectious	B	A	Unspecified			
	1979	1978	1979	1979	CUM. 1979	1979	1978*	1979	1979	1979	1979	1979	CUM. 1979	
UNITED STATES	46	1	6,876	9	49	7	11	4	272	543	263	11	79	
NEW ENGLAND	-	-	538	-	-	-	-	-	3	21	12	1	4	
Maine †	-	-	87	-	-	-	-	-	-	5	-	-	-	
N.H. †	-	-	25	-	-	-	-	-	-	2	-	-	-	
Vt.	-	-	-	-	-	-	-	-	-	1	-	-	-	
Mass.	-	-	375	-	-	-	-	-	1	9	11	-	-	
R.I.	-	-	51	-	-	-	-	-	-	2	-	-	3	
Conn.	-	-	430	-	-	-	-	-	2	2	1	1	1	
MID. ATLANTIC	8	-	754	-	-	2	2	-	46	56	18	4	11	
Upstate N.Y.	2	-	402	-	-	1	-	-	5	18	7	-	2	
N.Y. City	3	-	58	-	-	1	1	-	22	13	7	2	7	
N.J. †	1	-	NN	-	-	-	-	-	15	10	3	1	1	
Pa. †	2	-	254	-	-	-	1	-	4	15	1	1	1	
E.N. CENTRAL	3	-	2,844	-	-	-	1	2	32	98	11	-	3	
Ohio †	-	-	229	-	-	-	-	-	1	14	-	-	1	
Ind. †	-	-	-	-	-	-	-	-	5	3	4	-	-	
Ill.	1	-	955	-	-	-	-	-	8	40	1	-	-	
Mich.	2	-	1,067	-	-	-	1	-	14	35	6	-	2	
Wis. †	-	-	593	-	-	-	-	2	4	6	-	-	-	
W.N. CENTRAL	-	-	758	-	-	-	-	1	19	28	3	-	3	
Minn.	-	-	-	-	-	-	-	-	4	14	1	-	2	
Iowa †	-	-	355	-	-	-	-	-	3	-	-	-	-	
Mo.	-	-	140	-	-	-	-	1	8	6	2	-	1	
N. Dak. †	-	-	9	-	-	-	-	-	-	-	-	-	-	
S. Dak.	-	-	18	-	-	-	-	-	1	4	-	-	-	
Nebr.	-	-	1	-	-	-	-	-	2	-	-	-	-	
Kans.	-	-	275	-	-	-	-	-	1	4	-	-	-	
S. ATLANTIC	10	1	566	-	-	-	2	1	39	52	31	1	18	
Dal.	-	-	4	-	-	-	-	-	3	-	-	1	1	
Md.	1	-	60	-	-	-	-	-	11	6	3	-	3	
D.C.	-	-	5	-	-	-	-	-	-	1	-	-	4	
Va. †	4	1	57	-	-	-	-	1	5	4	9	-	5	
W. Va. †	-	-	197	-	-	-	-	-	-	1	-	-	1	
N.C.	2	-	NN	-	-	-	-	-	6	10	4	-	-	
S.C.	-	-	3	-	-	-	2	-	5	5	3	-	-	
Ga.	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	1	
Fla.	3	-	240	-	-	-	-	-	9	25	12	-	3	
E.S. CENTRAL	2	-	144	-	-	-	-	-	7	17	-	-	-	
Ky.	-	-	121	-	-	-	-	-	-	-	-	-	-	
Tenn.	-	-	NN	-	-	-	-	-	3	9	-	-	-	
Ala.	1	-	19	-	-	-	-	-	2	1	-	-	-	
Miss.	1	-	4	-	-	-	-	-	2	7	-	-	-	
W.S. CENTRAL	6	-	301	-	-	1	1	-	24	110	70	2	7	
Ark.	-	-	2	-	-	-	-	-	4	6	1	-	1	
La.	4	-	NN	-	-	-	-	-	5	27	11	-	-	
Okla. †	-	-	-	-	-	-	-	-	2	-	2	-	-	
Tex.	2	-	259	-	-	1	1	-	13	77	56	2	6	
MOUNTAIN	-	-	85	-	1	-	1	-	15	46	58	1	1	
Mont.	-	-	25	-	-	-	-	-	1	1	-	-	-	
Idaho	-	-	4	-	-	-	-	-	-	5	-	-	-	
Wyo.	-	-	-	-	-	-	-	-	1	-	-	1	1	
Colo.	-	-	51	-	-	-	1	-	6	15	6	-	-	
N. Mex.	-	-	-	-	-	-	-	-	4	4	1	-	-	
Ariz.	-	-	NN	-	1	-	-	-	1	19	38	-	-	
Utah	-	-	2	-	-	-	-	-	2	-	12	-	-	
Nev.	-	-	3	-	-	-	-	-	-	2	1	-	-	
PACIFIC	17	-	446	9	48	4	4	-	87	115	60	2	32	
Wash. †	2	-	403	9	47	1	-	-	7	27	6	-	1	
Oreg.	-	-	-	-	-	1	-	-	6	13	-	-	2	
Calif. †	13	-	-	-	1	2	4	-	72	73	54	2	28	
Alaska	1	-	8	-	-	-	-	-	2	-	-	-	-	
Hawaii	1	-	35	-	-	-	-	-	-	2	-	-	1	
Guam †	NA	NA	NA	NA	-	NA	-	-	NA	NA	NA	NA	-	
P.R.	5	-	28	-	-	-	-	-	-	2	1	-	-	
V.I.	-	-	-	-	-	-	-	-	-	-	-	-	-	
Pac. Trust Terr.	-	-	4	-	-	-	-	-	-	-	-	-	-	

NA: Not available.
 *Delayed reports received for 1978 are not shown below but are used to update last year's weekly and cumulative totals.
 †The following delayed reports will be reflected in next week's cumulative totals: Asep. meng.: Ohio +2, Ind. +1; Chickenpox: Ind. +239, Iowa +1, Wash. +86, Calif. +124, Guam +7; Hep. B: N.J. -1, Pa. +23, W. Va. +1, Okla. -1; Hep. A: Me. +1, N.H. -2, N.J. -2, Pa. +23, Wis. -1, N. Dak. +2, W. Va. -1, Okla. -2, Wash. +3, Guam +5; Hep. unsp.: N.J. -3, Pa. +4, Va. -1, Guam +9.

TABLE III (Cont.'d). Cases of specified notifiable diseases, United States, weeks ending March 17, 1979, and March 18, 1978 (11th week)

REPORTING AREA	MEASLES (RUBEOLA)			MENINGOCOCCAL INFECTIONS TOTAL			MUMPS		PERTUSSIS	RUBELLA		TETANUS
	1978	CUM. 1978	CUM. 1978*	1978	CUM. 1978	CUM. 1978*	1978	CUM. 1978	1978	1978	CUM. 1978	CUM. 1978
UNITED STATES	324	2,636	4,904	60	690	578	527	3,840	21	464	2,277	8
NEW ENGLAND	-	105	263	3	19	37	11	199	-	21	229	-
Maine	-	2	110	-	1	3	1	85	-	-	11	-
N.H.†	-	3	10	-	3	5	-	2	-	-	17	-
Vt.	-	3	5	1	1	1	-	4	-	11	82	-
Mass.	-	-	65	-	4	12	3	14	-	6	77	-
R.I.	-	100	-	-	1	7	-	7	-	3	7	-
Conn.	-	-	73	2	9	9	7	87	-	1	35	-
MID. ATLANTIC	32	173	369	12	104	74	28	270	8	83	291	1
Upstate N.Y.	6	79	240	5	40	25	6	45	2	28	103	1
N.Y. City	13	73	72	1	28	21	2	33	6	6	29	-
N.J.†	13	13	1	4	26	13	7	137	-	41	92	-
Pa.†	-	8	56	2	10	15	13	55	-	8	67	-
E.N. CENTRAL	78	612	1,911	4	59	45	170	1,563	2	93	544	1
Ohio	-	4	73	-	16	3	20	467	-	3	21	-
Ind.†	-	39	41	1	16	11	-	84	-	-	77	-
Ill.	4	153	298	-	-	7	54	302	1	2	55	-
Mich.	37	265	1,268	3	21	21	51	278	1	77	326	1
Wis.	37	147	231	-	6	3	45	432	-	11	65	-
W.N. CENTRAL	28	336	37	2	21	23	29	277	2	40	100	-
Minn.	23	135	6	-	3	3	-	2	2	4	13	-
Iowa	-	1	8	-	3	4	14	91	-	34	38	-
Mo.	5	185	1	1	12	11	1	96	-	1	14	-
N. Dak.	-	2	-	-	-	-	-	1	-	1	6	-
S. Dak.	-	1	-	-	1	2	-	1	-	-	-	-
Nebr.	-	-	3	-	-	-	-	3	-	-	-	-
Kans.	-	8	19	1	2	3	14	83	-	-	29	-
S. ATLANTIC	37	250	1,394	7	162	164	8	135	1	47	176	2
Del.	-	-	4	-	2	-	1	6	-	-	1	-
Md.	-	5	1	2	11	7	3	20	-	-	-	-
D.C.	-	-	-	-	-	1	-	1	-	-	-	-
Va.	10	28	563	-	33	22	-	35	-	2	6	-
W. Va.	-	31	225	-	3	5	2	34	-	7	48	-
N.C.	9	45	37	2	24	39	2	8	-	25	56	2
S.C.	7	24	110	1	27	14	-	1	1	12	16	-
Ge.	NA	2	4	-	29	27	NA	2	NA	NA	1	-
Fla.	11	111	50	2	33	57	-	28	-	1	48	-
E.S. CENTRAL	-	47	403	6	56	49	26	464	1	16	80	2
Ky.	-	8	45	-	11	11	18	325	-	5	21	-
Tenn.	-	9	288	2	16	17	7	47	1	11	39	-
Ala.	-	24	1	2	16	13	-	4	-	-	12	2
Miss.	-	6	69	2	13	9	1	18	-	-	8	-
W.S. CENTRAL	37	332	262	16	131	82	219	553	6	22	69	2
Ark.	1	8	2	1	11	9	182	260	-	-	-	2
La.	-	55	139	7	68	23	7	17	1	-	6	-
Okla.	-	3	5	-	8	8	-	-	1	12	16	-
Tex.†	36	226	116	8	44	42	29	276	4	10	47	-
MOUNTAIN	3	64	45	-	35	10	1	132	-	23	121	-
Mont.	-	18	29	-	2	1	-	5	-	2	23	-
Idaho	-	1	1	-	3	1	-	2	-	16	71	-
Wyo.	-	-	-	-	-	-	-	-	-	-	-	-
Colo.	-	4	7	-	1	1	-	46	-	-	12	-
N. Mex.	-	9	-	-	2	2	-	2	-	-	-	-
Ariz.	3	15	4	-	23	3	1	9	-	5	11	-
Utah	-	13	1	-	3	1	-	62	-	-	4	-
Nev.†	-	4	3	-	1	1	-	6	-	-	-	-
PACIFIC	105	713	220	10	103	94	36	247	1	119	667	-
Wash.†	37	333	30	3	12	17	16	101	-	13	62	-
Oreg.	5	9	38	-	7	4	6	22	-	11	36	-
Calif.	62	326	151	7	79	69	12	106	1	93	562	-
Alaska	-	6	-	-	1	3	1	5	-	-	1	-
Hawaii	5	35	1	-	4	1	1	13	-	2	6	-
Guam†	NA	-	1	-	-	-	NA	-	NA	NA	-	-
P.R.	42	133	56	-	-	-	20	202	-	1	9	-
V.I.	-	1	5	-	-	-	-	1	-	-	-	-
Pac. Trust Terr.	2	5	266	-	1	2	1	10	1	-	-	-

NA: Not available.

*Delayed reports received for 1978 are not shown below but are used to update last year's weekly and cumulative totals.

†The following delayed reports will be reflected in next week's cumulative totals: Measles: Pa. -1, Ind. +17, Tex. -1, Nev. -2, Wash. -19; Men. Inf.: N.H. +1, N.J. +1, Tex. -1, Wash. +3; Mumps: Ind. +5, Wash. +2; Pertussis: Ind. +1; Rubella: N.H. +1, Ind. +23, Wash. +1, Guam +1.

TABLE III (Cont'd). Cases of specified notifiable diseases, United States, weeks ending March 17, 1979, and March 18, 1978 (11th week)

REPORTING AREA	TUBERCULOSIS		TULA-REMI	TYPHOID FEVER		TYPHUS FEVER (Tick-borne) (RMSF)		VENEREAL DISEASES (Civilian)						RABIES (in Animals)
								GONORRHEA			SYPHILIS (Pri. & Sec.)			
	1979	CUM. 1979	CUM. 1978	1979	CUM. 1979	1979	CUM. 1979	1979	CUM. 1978	CUM. 1978*	1979	CUM. 1978	CUM. 1978*	CUM. 1978
UNITED STATES	576	5,596	25	9	78	1	21	18,544	199,239	191,812	467	5,084	4,201	612
NEW ENGLAND	12	159	1	1	7	-	-	392	5,447	4,705	11	92	138	12
Maine	2	11	-	1	1	-	-	18	341	359	-	1	2	11
N.H.	1	3	-	-	-	-	-	17	166	232	-	2	1	1
Vt.	-	6	-	-	-	-	-	5	83	118	-	-	-	-
Mass.	6	96	1	-	4	-	-	183	2,267	2,031	6	59	92	-
R.I.	-	12	-	-	1	-	-	36	460	285	-	3	3	-
Conn.	3	31	-	-	1	-	-	133	2,150	1,680	5	27	40	-
MID. ATLANTIC	83	925	-	1	13	-	-	2,162	22,187	21,449	97	818	536	2
Upstate N.Y. †	7	156	-	-	3	-	3	389	3,987	3,185	6	63	40	2
N.Y. City	35	348	-	1	5	-	-	804	8,024	8,563	68	554	379	-
N.J.	7	156	-	-	4	-	-	354	4,252	3,918	9	100	62	-
Pa.	34	265	-	-	1	-	-	615	5,924	5,783	14	101	55	-
E.N. CENTRAL	93	796	-	-	5	-	2	4,181	28,681	26,294	57	666	414	35
Ohio	27	165	-	-	-	-	2	1,943	8,867	7,001	21	154	74	3
Ind.	6	122	-	-	-	-	-	546	2,387	3,147	8	36	26	2
Ill. †	6	105	-	-	3	-	-	761	7,294	7,134	25	372	261	17
Mich.	21	174	-	-	2	-	-	691	7,336	6,438	3	81	38	-
Wis. †	3	30	-	-	-	-	-	240	2,797	2,574	-	23	15	13
W.N. CENTRAL	14	194	9	-	1	-	1	829	9,709	9,529	3	63	92	127
Minn.	-	22	-	-	-	-	-	113	1,716	1,823	1	20	37	31
Iowa †	3	25	-	-	-	-	-	70	1,280	1,203	-	6	7	35
Mo.	8	105	7	-	1	-	-	422	4,116	3,568	2	23	25	31
N. Dak. †	-	7	-	-	-	-	-	7	161	237	-	-	-	10
S. Dak.	3	10	1	-	-	-	-	38	321	366	-	1	2	-
Nebr.	-	2	1	-	-	-	-	39	621	705	-	13	20	10
Kans.	-	23	-	-	-	-	1	140	1,494	1,627	-	-	-	-
S. ATLANTIC	149	1,284	1	-	7	-	8	3,899	47,591	46,223	134	1,318	1,135	83
Del.	2	12	-	-	-	-	-	69	747	800	1	8	3	-
Md.	14	184	-	-	2	-	4	546	5,708	6,469	8	89	78	-
D.C.	8	59	-	-	1	-	-	252	2,933	2,991	8	91	98	-
Va.	14	152	-	-	1	-	-	464	4,531	4,139	11	133	110	1
W. Va.	6	48	-	-	-	-	-	51	681	714	-	20	4	-
N.C.	30	217	-	-	-	-	3	617	7,520	6,088	8	123	98	-
S.C.	16	52	1	-	-	-	1	314	3,985	4,290	11	72	56	26
Georgia	17	184	-	NA	-	NA	-	791	9,009	8,758	52	342	270	56
Fla. †	42	378	-	-	3	-	-	795	12,477	11,974	35	440	418	-
E.S. CENTRAL	68	515	4	1	6	-	5	1,525	17,571	16,593	50	369	193	23
Ky.	24	114	2	-	2	-	-	229	2,436	1,861	7	38	15	7
Tenn.	16	143	2	-	1	-	1	577	6,142	6,043	16	159	74	7
Ala.	7	106	-	1	3	-	4	289	5,201	5,074	8	70	26	9
Miss.	21	152	-	-	-	-	-	430	3,752	3,615	19	102	74	-
W.S. CENTRAL	74	657	4	1	5	1	1	2,316	27,077	26,868	66	851	644	258
Ark.	7	40	2	-	-	-	-	144	2,146	1,993	1	26	26	52
La.	22	162	1	-	-	-	-	541	4,639	4,410	12	177	134	2
Okla.	7	86	-	-	-	-	-	200	2,339	2,368	3	15	23	49
Tex.	38	369	1	1	5	1	1	1,431	17,953	18,097	50	633	461	155
MOUNTAIN	16	164	5	-	3	-	1	639	7,742	7,044	5	65	84	8
Mont.	-	5	-	-	-	-	-	36	378	459	-	4	6	-
Idaho	-	4	-	-	-	-	-	30	350	240	3	6	-	-
Wyo.	-	3	-	-	-	-	-	7	200	164	-	3	3	-
Colo.	1	11	-	-	-	-	-	191	2,146	1,987	1	25	29	-
N. Mex.	3	26	1	-	1	-	-	39	965	994	-	7	16	5
Ariz.	12	98	-	-	1	-	-	170	2,156	1,701	-	11	19	3
Utah	-	3	4	-	-	-	-	59	390	420	-	1	3	-
Nev.	-	14	-	-	1	-	1	107	1,157	1,079	1	8	8	-
PACIFIC	67	903	1	5	31	-	-	2,601	33,234	33,107	44	842	965	64
Wash. †	5	13	-	1	1	-	-	167	2,684	2,316	NA	19	40	-
Oreg.	4	48	-	-	-	-	-	220	2,274	2,346	2	41	24	-
Calif.	55	759	1	4	26	-	-	2,047	26,637	26,838	42	763	890	62
Alaska	-	25	-	-	-	-	-	117	1,085	976	-	2	4	2
Hawaii	3	55	-	-	4	-	-	50	554	631	-	17	7	-
Guam †	NA	2	-	NA	-	NA	-	NA	6	27	NA	-	-	-
P.R.	6	62	-	-	1	-	-	43	405	587	15	126	91	4
V.I.	-	-	-	-	-	-	-	6	36	55	-	-	4	-
Pac. Trust Terr.	-	8	-	-	-	-	-	1	44	110	-	-	-	-

NA: Not available.
 †Delayed reports received for 1978 are not shown below but are used to update last year's weekly and cumulative totals.
 ‡The following delayed reports will be reflected in next week's cumulative totals: TB: Iowa -2, Fla. -2, Guam +6; Tularemia: N.Dak. -1; GC: Ill. +2432 civ., Wis. -1 civ., Wash. +102 mil., Guam +9 civ. +10 mil.; Syphilis: Ill. -2, Wash. +21 civ. +2 mil.; An. rabies: Ups N.Y. +1.

TABLE IV. Deaths in 121 U.S. cities,* week ending
March 17, 1979 (11th week)

REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I**	REPORTING AREA	ALL CAUSES, BY AGE (YEARS)					P & I**
	ALL AGES	>65	45-64	25-44	<1			ALL AGES	>65	45-64	25-44	<1	
NEW ENGLAND	655	433	143	37	28	47	S. ATLANTIC	1,269	747	346	85	53	50
Boston, Mass.	179	105	44	15	10	23	Atlanta, Ga.	197	98	58	20	17	5
Bridgeport, Conn.††	42	29	9	2	1	4	Baltimore, Md.	206	110	69	14	10	8
Cambridge, Mass.	23	19	4	—	—	2	Charlotte, N.C.	66	35	22	2	4	6
Fall River, Mass.	35	24	8	2	1	1	Jacksonville, Fla.	51	57	21	7	2	3
Hartford, Conn.	67	45	13	3	5	3	Miami, Fla.	170	109	41	12	3	3
Lowell, Mass.	19	16	2	—	1	—	Norfolk, Va.	59	32	13	6	5	2
Lynn, Mass.	12	7	1	3	1	—	Richmond, Va.	84	47	26	3	4	6
New Bedford, Mass.	28	25	3	—	—	2	Savannah, Ga.	43	28	12	1	1	2
New Haven, Conn.	47	25	13	1	6	1	St. Petersburg, Fla.	87	70	13	3	1	7
Providence, R.I.	53	35	12	4	1	2	Tampa, Fla.	81	57	18	3	2	2
Somerville, Mass.	9	8	1	—	—	1	Washington, D.C.	155	85	45	16	4	5
Springfield, Mass.	60	37	16	3	2	5	Wilmington, Del.	30	19	8	2	—	1
Waterbury, Conn.	25	16	8	1	—	2							
Worcester, Mass.	56	42	9	3	—	1							
							E.S. CENTRAL	747	451	186	35	52	41
MID. ATLANTIC	2,220	1,443	518	126	79	74	Birmingham, Ala.	113	68	28	5	6	2
Albany, N.Y.	43	31	9	1	2	4	Chattanooga, Tenn.	55	30	16	5	4	2
Allentown, Pa.	18	10	8	—	—	—	Knoxville, Tenn.	50	32	13	3	—	2
Buffalo, N.Y.	116	76	27	8	4	4	Louisville, Ky.	130	89	33	3	1	12
Camden, N.J.	38	22	14	—	1	2	Memphis, Tenn.	177	101	36	8	25	4
Elizabeth, N.J.	30	16	8	7	2	—	Mobile, Ala.	67	42	19	3	3	3
Erie, Pa.†	29	21	2	2	4	1	Montgomery, Ala.	34	21	9	—	2	4
Jersey City, N.J.	89	53	21	5	9	1	Nashville, Tenn.	121	68	32	4	11	12
Newark, N.J.	56	23	19	6	6	4							
N.Y. City, N.Y.	1,431	931	338	83	41	45	W.S. CENTRAL	1,613	961	439	115	72	53
Paterson, N.J.	28	20	6	1	1	3	Austin, Tex.	67	47	8	6	—	2
Philadelphia, Pa.†	410	246	96	32	24	23	Baton Rouge, La.	27	15	10	1	—	3
Pittsburgh, Pa.†	79	33	34	3	6	3	Corpus Christi, Tex.	44	23	10	4	7	2
Reading, Pa.	38	28	7	3	—	—	Dallas, Tex.	180	107	46	11	4	6
Rochester, N.Y.	142	100	24	8	5	6	El Paso, Tex.	58	34	16	1	4	4
Schenectady, N.Y.	26	20	4	1	—	1	Fort Worth, Tex.	97	49	34	6	3	8
Scranton, Pa.†	24	17	6	1	—	1	Houston, Tex.	559	277	170	56	26	15
Syracuse, N.Y.	86	58	16	5	5	2	Little Rock, Ark.	55	30	16	2	2	1
Trenton, N.J.	31	18	11	—	2	1	New Orleans, La.	200	102	65	13	9	—
Utica, N.Y.	28	19	5	1	1	1	San Antonio, Tex.	182	115	37	12	9	6
Yonkers, N.Y.	20	18	1	1	—	—	Shreveport, La.	70	54	10	2	4	1
							Tulsa, Okla.	74	48	17	5	2	5
E.N. CENTRAL	2,340	1,415	594	128	103	66	MOUNTAIN	582	329	145	46	23	25
Akron, Ohio	79	50	17	5	4	—	Albuquerque, N.Mex.	69	40	18	5	—	7
Canton, Ohio	50	35	9	3	3	3	Colo. Springs, Colo.	42	23	13	2	—	4
Chicago, Ill.	561	313	151	38	31	17	Denver, Colo.	103	67	19	6	4	4
Cincinnati, Ohio	160	101	41	10	6	2	Las Vegas, Nev.	59	16	23	10	2	—
Cleveland, Ohio	183	55	54	12	10	—	Ogden, Utah	19	11	2	1	3	2
Columbus, Ohio	129	83	32	4	5	3	Phoenix, Ariz.	131	75	36	9	6	1
Dayton, Ohio	112	70	33	3	2	—	Pueblo, Colo.	31	26	5	—	—	5
Detroit, Mich.	300	177	71	23	11	14	Salt Lake City, Utah	48	24	11	4	7	2
Evansville, Ind.	38	27	8	1	2	4	Tucson, Ariz.	80	47	18	5	1	—
Fort Wayne, Ind.	61	37	12	5	2	5							
Gary, Ind.	24	10	9	1	2	1	PACIFIC	1,830	1,137	435	128	63	47
Grand Rapids, Mich.	53	31	14	1	7	2	Berkeley, Calif.	15	11	4	—	—	1
Indianapolis, Ind.	148	88	44	7	4	6	Fresno, Calif.	58	34	13	7	3	2
Madison, Wis.	23	15	4	2	1	1	Glendale, Calif.	32	19	10	1	—	1
Milwaukee, Wis.	137	97	29	3	7	4	Honolulu, Hawaii	66	35	20	6	2	2
Peoria, Ill.	34	23	7	2	1	1	Long Beach, Calif.	118	73	29	5	4	13
Rockford, Ill.	39	25	6	—	3	2	Los Angeles, Calif.	556	337	139	46	12	3
South Bend, Ind.	28	21	4	—	1	1	Oakland, Calif.	72	47	11	6	—	1
Toledo, Ohio	114	79	26	6	1	—	Pasadena, Calif.	29	19	4	1	—	1
Youngstown, Ohio	67	38	23	2	—	—	Portland, Oreg.	130	85	26	5	8	3
							Sacramento, Calif.	65	43	12	3	2	1
W.N. CENTRAL	791	466	189	43	32	36	San Diego, Calif.	167	96	51	8	8	—
Des Moines, Iowa	71	39	21	6	3	1	San Francisco, Calif.	124	85	25	6	2	1
Duluth, Minn.	29	22	5	2	—	4	San Jose, Calif.	155	87	38	15	8	2
Kansas City, Kans.	45	29	10	2	2	1	Seattle, Wash.	152	104	32	6	7	2
Kansas City, Mo.	112	71	30	4	4	4	Spokane, Wash.	56	38	12	2	3	2
Lincoln, Neb.	22	13	6	3	—	2	Tacoma, Wash.	35	24	9	1	—	3
Minneapolis, Minn.	92	51	24	8	5	5							
Omaha, Neb.	88	57	22	3	3	1							
St. Louis, Mo.	179	115	36	8	9	7							
St. Paul, Minn.	85	55	19	5	4	3							
Wichita, Kans.	68	44	16	2	2	8							
							TOTAL	12,047	7,352	2,995	751	505	439
							Expected Number	11,252	7,082	2,824	665	407	459

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza

†Because of changes in reporting methods in these 4 Pennsylvania cities, there will now be 117 cities involved in the generation of the expected values used to monitor pneumonia and influenza activity in the United States. Data from these 4 cities will appear in the tables but will not be included in the totals for the United States and the Middle Atlantic Region.

††Data not available this week. Figures are estimates based on average percent of regional totals.

DDT Residues — Continued

related compounds because they are exposed primarily to p,p'-DDT and o,p'-DDT rather than to metabolites such as p,p'-DDE in the food chain. No adverse health effects from these concentrations of DDT residues have been demonstrated in male industrial workers or in volunteers (4). However, long-term effects and the safety of such levels in a general population have not been studied.

References

1. Morgan DP, Roan CC: Absorption, storage, and metabolic conversion of ingested DDT and DDT metabolites in man. *Arch Environ Health* 22:301-308, 1971
2. Laws ER, Curley A, Biros FJ: Men with intensive occupational exposure to DDT. *Arch Environ Health* 15:766-775, 1967
3. Poland A, Smith D, Kuntzman R, Jacobson M, Conney AH: Effect of intensive occupational exposure to DDT on phenylbutazone and cortisol metabolism in human subjects. *Clin Pharmacol Ther* 11:724-732, 1970
4. Hayes WJ, Dale WE, Pirkle CI: Evidence of safety of long-term, high, oral doses of DDT for man. *Arch Environ Health* 22:119-135, 1971

Salmonellosis Associated with Consumption of Nonfat Powdered Milk — Oregon

One symptomatic case of salmonellosis and 2 asymptomatic *Salmonella* infections have occurred in Oregon in association with consumption of 1 brand of nonfat powdered milk. Implicated lots of this milk have been voluntarily recalled.

The case occurred in a 14-month-old infant, who developed an acute illness consisting of diarrhea and fever on January 15, 1979. A stool culture from the patient yielded *S. agona* and *S. typhimurium*, as did a culture of a previously opened box of nonfat powdered milk taken from the patient's home. Stool cultures of the patient's family detected *S. typhimurium* and *S. agona* infections in an asymptomatic 3-year-old sibling.

A laboratory worker who was aware of the first case and had nonfat powdered milk of the same brand in his home submitted stool cultures for testing for salmonellae from himself and his wife. His wife had not consumed the nonfat powdered milk, but he had. His stool culture was positive for *S. typhimurium* and *S. agona*; his wife's was negative. *S. agona* and *S. typhimurium* organisms were isolated from the open box of powdered milk taken from their home.

In an effort to detect other cases of salmonellosis associated with consumption of the product, the Oregon Department of Human Resources and local health departments conducted a telephone survey of 55 persons in Oregon who had had salmonellosis caused by *S. typhimurium* or *S. agona* after June 1978. None of these patients gave a history of having consumed the implicated milk.

Investigation by the Food and Drug Administration (FDA) has determined that the lot of nonfat powdered milk consumed by all 3 infected persons was packaged on October 26, 1978, and was distributed to Oregon. On February 14, 1979, the state health division released information concerning the problem. The lots of the implicated brand packaged between May 1 and November 1, 1978, were voluntarily withdrawn from the market.

Cultures by the FDA of the only 6 available unopened packages of nonfat powdered milk from the same lot as that consumed by the infected persons were negative for *Salmonella* organisms.

Oregon reported 11 isolations of *S. typhimurium* for January 1978 and 28 for January 1979. However, a review of reported *S. typhimurium* and *S. agona* isolations in Oregon and 4 other western states for the periods November 1977-January 1978 and November 1978-January 1979 revealed no significant variations (Table 1).

Salmonellosis - ContinuedTABLE 1. Reported *Salmonella typhimurium* and *S. agona* isolates, by state, November 1977-January 1978 and November 1978-January 1979

State	<i>S. typhimurium</i> isolates		<i>S. agona</i> isolates	
	November 1977- January 1978	November 1978- January 1979	November 1977- January 1978	November 1978- January 1979
Oregon	48	52	1	2
Washington	43	57	7	4
California	170	131	48	42
Utah	10	5	1	2
Idaho	10	7	0	0

Reported by JD Furlong, W Lee, Multnomah County Health Division; LR Foster, MD, Deputy State Epidemiologist, LP Williams, DVM, DrPH, Oregon State Health Div; FDA; USDA; Enteric Diseases Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

Editorial Note: Pasteurization as a routine procedure with milk significantly reduced the problem of milk as a vehicle for transmitting *Salmonella* and other infections (1,2). Non-fat powdered milk has only occasionally been shown to be a vehicle of salmonellosis (3,4). The U.S. Department of Agriculture (USDA), which monitors plants producing nonfat powdered milk, has detected *Salmonella* contamination in up to 1.9% of product samples tested since 1970. The 3 most commonly found serotypes have been *S.anatum*, *S. cubana*, and *S. tennessee*. Culture-positive lots are reprocessed.

References

1. Wilson GS: The pasteurization of milk. London, E. Arnold & Co., 1942
2. Marth EH: Salmonellae and salmonellosis associated with milk and milk products: A review. J Dairy Sci 52:283-315, 1969
3. MMWR: Lactose-fermenting salmonella infection. 16:18-24, 1967
4. Collins RS, Treger MD, Goldsby JB, Boring JR, Coohon DB, Barr RN: *Salmonella* infection traced to powder milk. JAMA 203:838-844, 1968

Lead Poisoning in a State Home for the Retarded - New Jersey

Through a routine blood examination, a long-term resident of an institution for the mentally retarded in New Jersey was found in March 1978 to have pronounced basophilic stippling of his red blood cells. Subsequent blood lead analysis showed a lead level of $>200 \mu\text{g}/\text{dl}$, and a diagnosis of lead poisoning was made.

Erythrocyte protoporphyrin (EP) levels were determined for 618 residents of the institution in a follow-up evaluation. A blood lead level was determined for residents whose EP level was $>50 \mu\text{g}/\text{dl}$. Seventeen (2.8%) of these residents were found to have a blood lead level $>40 \mu\text{g}/\text{dl}$, indicating increased lead absorption; 4 were chelated.

None of the residents had any symptoms or signs attributable to lead poisoning, and there was no neurologic improvement following therapy. Questionnaire data and review of medical records of 602 residents indicated a significant association between a patient's history of pica and the finding of a blood lead level $>40 \mu\text{g}/\text{dl}$ ($p<.001$, Table 2).

TABLE 2. Association of blood lead levels with history of pica, New Jersey mental institution, March-April 1978

History of pica	Blood lead ($\mu\text{g}/\text{dl}$)	
	<40	>40
yes	89	14
maybe	72	3
no	441	0

Lead Poisoning — Continued

Elevated blood lead levels were more common in residents under 20 years of age (8/26) than in those 20 years and over (9/576) ($p < .001$), but there was no association between blood lead levels and length of residence in the institution.

The New Jersey State Department of Health undertook an environmental survey using a portable X-ray fluorescence lead paint detector. Investigators found that painted surfaces in 9 of 13 cottages had mean lead readings of above 2 mg/cm², a reading indicative of a lead content in paint in excess of 1%. Playground equipment also had high levels of lead paint. As a result of these findings, the state department of health has recommended that cottages with high environmental lead levels be evacuated, that lead-based paint be removed from the cottages and recreation equipment, and that other state institutions for the retarded be screened for lead poisoning. The department has also recommended that all new admissions to state institutions be screened for blood lead and EP levels.

Reported by R Altman, MD, State Epidemiologist, A Brickman, MD, E Duffy MPH, DS Kwalick, MD, S Lavine, I Plante, MD, O Ross, MD, J Sussman, G Van Benthysen, W Wiseman, LZ Ziskin, MD, MS, New Jersey Dept of Health; Field Services Div, Bur of Epidemiology, CDC.

DTP Vaccination and Sudden Infant Deaths — Tennessee

On March 9, 1979, the Tennessee State Department of Public Health reported to CDC 4 deaths in infants 2 to 3 months of age who had received within 24 hours of their deaths a dose of DTP vaccine from a single lot, No. 64201, manufactured by Wyeth Laboratories, Inc. Oral polio vaccine from 3 different lots had been given at the same time. Autopsies were performed on 2 children, and all 4 deaths were listed as unexplained sudden infant deaths on the death certificates. On July 5, 1978, the Tennessee State Department of Public Health had received 150,000 doses of Wyeth DTP vaccine Lot No. 64201 in 15-dose vials; approximately 96,105 doses have been administered. All but 2,345 doses from the bulk lot from which Lot No. 64201 was prepared were distributed through public clinics in Tennessee; the rest were distributed to private pharmacies and physicians. On March 11, Tennessee withdrew Lot No. 64201 from public clinics within the state.

An investigation of unexplained sudden infant deaths* in Tennessee during the periods August 1977 through March 1978 and August 1978 through March 1979 revealed 74 and 77 deaths, respectively. Deaths were identified by a review of death certificates, and immunization histories were obtained from public clinic records. Eight deaths had occurred within 1 week of vaccination in the 1978-79 time period; 2 were recorded in 1977-78 (Table 3). Of the 151 infants who died suddenly, the proportion who had received DTP immunization in public clinics was significantly higher for the 1978-79 period ($p < 0.03$). Given the higher rate of immunization in public clinics, the signifi-

*Unexplained sudden infant death includes sudden infant death syndrome, crib death, acute fatal infant syndrome, unexpected death, and similar notations on death certificates of children under 1 year of age.

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DTP Vaccination – Continued

cance of the cluster of deaths within 1 week of immunization with a single lot of DTP vaccine is unclear.

The bulk lot of DTP vaccine produced by Wyeth contained 480,745 doses. Of these, 361,035 were in 15-dose vials (Lot No. 64201), and 119,710 were in single-dose vials (Lots 61987, 61988, 61989, 61990, and 61991). Results of tests on the vaccine before its release, conducted by the manufacturer and the Bureau of Biologics, Food and Drug Administration, were satisfactory. On March 21, Wyeth Laboratories, Inc., withdrew this bulk lot of vaccine from further distribution and use in the United States.

Further investigation of the immunization histories of infants who died suddenly in Tennessee during the 2 time periods is continuing.

Reported by R Hutcherson, Jr, MD, State Epidemiologist, Tennessee State Dept of Public Health; Immunization Div, Bur of State Services, Field Services Div, and Special Pathogens Br, Bacterial Diseases Div, Bur of Epidemiology, CDC.

TABLE 3. Sudden infant deaths and DTP vaccination in public clinics, Tennessee, August 1977-March 1978 and August 1978-March 1979

Time period	Deaths		Immunized with DTP in public clinics		
	All deaths	2+ months-old	Total	Within 1 day	Within 2-7 days
1978-79	77	42	21	4	4
1977-78	74	41	11	0	2

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p 93 In the article "Paraquat Contamination of Marijuana – United States," fourth paragraph, U.S. Census Division VI includes the states of New Mexico, Texas, Oklahoma, *Arkansas*, and Louisiana," not Arizona, as written.

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